

Background

In 2020, the National Association of Rural Health Clinics established the NARHC Research and Education Foundation. One of the objectives of the Foundation is to create an RHC data warehouse that will make RHC information readily available to the public – free of charge. This information could be made available to individuals, stakeholder organizations, academic institutions, government agencies and independent researchers.

For over a decade, the National Association of Rural Health Clinics has partnered with both the National Center for Rural Health Works (NCRHW) and the National Center for the Analysis of Healthcare Data (NCAHD) on various types of research and analytical support.¹ More recently, in support of other work being conducted on behalf of the REF board, we were contracted to update the previous data research to better understand trends in the RHC programs that occurred from 2020 to the end of 2022 beyond what is currently available through the Center for Medicare and Medicaid's (CMS) Quality, Certification, and Oversight Reports (QCOR) system.

Current QCOR data is limited because it groups together several different situations under the category of “terminated provider.” The new research would analyze this data to determine the number of RHCs in the 3-year period that:

- 1-Truly closed;
- 2-Converted to a different facility type, or
- 3-Are still operating as RHCs but just underwent a CMS Certification Number (CCN) change.

In addition to this research, we were contracted to generate several graphic illustrations of the research for use by NARHC staff, their membership, and the public.

Methodology

As delineated in the March proposal, NCAHD staff conducted a thorough review of the national QCOR to assess and categorize the changes over a 3-year period of time to help determine the status of the national rural health clinic landscape. The Center for Medicare and Medicaid's (CMS) Point of Service (POS) file and the Quality, Certification, and Oversight Reports (QCOR) actively collect data on rural health clinic's changes in status: 1) new, 2) closures, and 3) ownership changes and classifies these within the federal standardized program codes. However, the data collected with both the CMS POS file and QCOR do not explain why a RHC may receive a merged or closed/termination program code. Further research into the closed/merged program termination code utilized by the CMS POS file and QCOR shows that a RHC may receive the code for the following reasons: change of address, facility name change, a change in healthcare delivery model (Fee for service, FQHC, or independent and provider-

¹ For more information about the NCRHW and the NCAHD, please visit our websites (www.ncahd.org and www.ruralhealthworks.org)

based), or facility closure or merger. Therefore, the following methodology was established to determine the number of closed RHCs and provider status changes.

Due to recent updated standardization of their processing and an increase in federal funding, QCOR was found to be more current and therefore NCAHD staff downloaded the data on 4/10/2023 for the research. The data was downloaded for each year (2020, 2021, and 2022). Five states were found without data thus indicating that they didn't have any RHCs during this period, including: Alaska, Connecticut, Delaware, District of Columbia, New Jersey, and Rhode Island. Additionally, the U.S. Unincorporated territory of Puerto Rico, does not have any reported RHCs.

Once this master data set was collected, it was divided by state to perform state-based trend analysis and to validate the data on the state level. Thoroughness to quality and detail of each scenario was achieved through various methods but primarily by online research with follow-up phone conversation for verification of the status of the facility. The "terminated providers" list was then further subdivided into the following, more descriptive categories:

1-"Closed" status describes a location that no longer has anything relevant to health practicing at that location.

2-"No Longer Participating" (NLP) status describes a situation where a clinical entity still exists in the same location or area but is no longer tracked within the QCOR data and is no longer registered as an RHC.

3-"CCN Status Change", or just "CCN Change", describes an RHC entity that is found at the same or similar location with the same name that has a QCOR closure date that aligns with an original participation date for another RHC entity with the same name and location.

Important note: Throughout our research, we sought assistance from the NARHC staff for clarification on borderline situations.

Once the data was cleaned and NCAHD staff was able to determine the status of all registered RHCs, the data was collated into a single master file once again to perform national trend analysis. This consisted of tracking and comparing the attributed statuses for each RHC each year. Our final step was to create a spreadsheet of the results, from which the maps/analysis were to be derived. After viewing the final analysis, the NARHC staff requested summary charts and a national summary spreadsheet that would allow a viewer to find the exact state, year, attributed status, and RHC type. (See **Figure 1** below)

National Rural Health Clinics Trend Analysis (2020-2022)														
Research funded by the NARHC - Research & Education Foundation		Research conducted by the National Ctr. For the Analysis of Healthcare Data								NCAHD				
State	State Abbr.	RHC Type	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022
			New	Closed	CCN Change	No Longer Participating	New	Closed	CCN Change	No Longer Participating	New	Closed	CCN Change	No Longer Participating
Alabama	AL	Freestanding	6	0	0	0	8	1	0	5	3	1	0	1
Alabama	AL	Provider-based	14	1	0	0	3	1	0	0	1	0	0	3
Alaska	AK	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Alaska	AK	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	Freestanding	2	0	0	0	5	0	0	0	6	0	0	0
Arizona	AZ	Provider-based	2	0	0	1	1	0	0	0	1	0	0	0
Arkansas	AR	Freestanding	4	0	0	1	6	1	0	0	6	3	0	2
Arkansas	AR	Provider-based	3	1	0	0	4	0	0	0	1	1	0	1
California	CA	Freestanding	6	0	1	0	1	0	0	0	0	1	0	2
California	CA	Provider-based	2	0	0	1	8	1	0	1	1	0	0	0
Colorado	CO	Freestanding	0	0	1	0	0	0	0	1	0	1	0	0
Colorado	CO	Provider-based	5	0	0	0	3	0	0	0	1	2	0	1
Connecticut	CT	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Connecticut	CT	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	DE	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Delaware	DE	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
Florida	FL	Freestanding	1	0	1	4	4	2	0	2	4	1	0	0
Florida	FL	Provider-based	2	2	0	2	1	0	0	1	0	0	0	0
Georgia	GA	Freestanding	0	0	0	0	2	0	0	1	2	2	0	2
Georgia	GA	Provider-based	7	1	0	0	9	0	0	0	1	3	0	4
Hawaii	HI	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Hawaii	HI	Provider-based	2	0	0	0	8	0	0	0	0	0	0	0
Idaho	ID	Freestanding	0	1	0	0	0	0	0	0	0	0	0	0
Idaho	ID	Provider-based	2	0	0	0	5	0	0	1	0	1	0	0
Illinois	IL	Freestanding	3	1	0	3	1	2	0	1	5	1	0	1
Illinois	IL	Provider-based	14	3	0	2	9	4	0	0	4	0	0	1
Indiana	IN	Freestanding	0	0	0	2	0	0	0	0	11	0	0	0
Indiana	IN	Provider-based	12	0	0	1	4	0	0	1	7	0	0	0
Iowa	IA	Freestanding	3	0	3	1	0	0	0	0	0	0	0	0
Iowa	IA	Provider-based	13	0	1	3	7	1	0	0	3	1	0	2
Kansas	KS	Freestanding	0	0	0	0	6	0	0	0	0	1	0	0
Kansas	KS	Provider-based	7	2	0	0	7	0	0	2	4	0	0	0
Kentucky	KY	Freestanding	15	1	0	0	27	0	4	7	48	0	3	10
Kentucky	KY	Provider-based	5	1	0	0	11	1	0	1	4	0	0	0
Louisiana	LA	Freestanding	17	1	2	0	7	0	1	0	9	0	1	0
Louisiana	LA	Provider-based	10	0	0	0	6	0	0	0	2	0	0	0
Maine	ME	Freestanding	0	0	1	0	0	1	0	0	0	0	0	0
Maine	ME	Provider-based	2	0	0	0	0	0	0	0	0	0	0	0
Maryland	MD	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	MD	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	MA	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts	MA	Provider-based	1	0	0	0	1	0	0	0	0	0	0	0
Michigan	MI	Freestanding	0	1	4	0	1	0	1	1	1	1	0	2
Michigan	MI	Provider-based	27	2	0	5	17	0	0	0	1	1	0	1
Minnesota	MN	Freestanding	0	0	0	0	0	0	0	0	0	0	0	1
Minnesota	MN	Provider-based	3	1	0	0	2	1	0	0	0	0	0	1
Mississippi	MS	Freestanding	5	0	0	2	1	1	1	2	29	5	0	3
Mississippi	MS	Provider-based	15	1	0	0	15	1	0	0	7	0	0	2
Missouri	MO	Freestanding	2	1	0	4	0	4	0	3	3	0	0	4
Missouri	MO	Provider-based	5	4	0	3	2	4	0	1	4	0	1	3
Montana	MT	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Montana	MT	Provider-based	3	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	Freestanding	0	1	0	0	0	0	0	0	0	0	0	1
Nebraska	NE	Provider-based	1	1	0	2	2	1	0	0	0	3	0	2
Nevada	NV	Freestanding	0	0	0	0	2	0	0	0	0	0	0	0
Nevada	NV	Provider-based	1	0	0	0	0	0	0	0	0	0	0	0
New Hampshire	NH	Freestanding	0	0	0	0	0	0	0	0	1	0	0	0
New Hampshire	NH	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey	NJ	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey	NJ	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	NM	Freestanding	0	0	1	0	0	0	0	0	0	0	0	0
New Mexico	NM	Provider-based	1	0	0	0	1	0	0	0	0	0	0	0
New York	NY	Freestanding	0	0	0	0	0	0	0	0	1	0	3	0
New York	NY	Provider-based	10	0	0	0	11	0	0	0	3	0	0	0
North Carolina	NC	Freestanding	1	1	0	1	3	0	0	1	1	0	1	1
North Carolina	NC	Provider-based	4	0	0	1	2	1	0	1	1	0	0	0
North Dakota	ND	Freestanding	0	1	0	1	0	0	0	0	0	0	0	0
North Dakota	ND	Provider-based	2	0	0	0	3	0	0	0	1	0	0	0
Ohio	OH	Freestanding	0	0	1	2	1	0	0	0	0	0	0	0
Ohio	OH	Provider-based	7	0	0	0	1	0	0	0	3	0	0	0
Oklahoma	OK	Freestanding	1	0	0	0	18	0	0	0	2	0	0	0
Oklahoma	OK	Provider-based	12	2	0	0	5	2	0	2	8	2	0	1
Oregon	OR	Freestanding	1	0	0	0	8	0	0	0	3	3	0	1
Oregon	OR	Provider-based	1	0	0	0	5	1	0	0	0	0	0	0
Pennsylvania	PA	Freestanding	0	1	0	0	1	0	0	0	0	0	0	0
Pennsylvania	PA	Provider-based	5	0	0	0	0	0	0	1	0	0	0	0
Rhode Island	RI	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Rhode Island	RI	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
South Carolina	SC	Freestanding	0	0	0	0	3	0	1	3	1	0	0	0
South Carolina	SC	Provider-based	7	0	0	1	11	0	0	2	7	0	0	0
South Dakota	SD	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
South Dakota	SD	Provider-based	1	0	0	0	0	0	0	0	0	0	0	0
Tennessee	TN	Freestanding	17	1	7	0	25	1	1	0	69	2	1	3
Tennessee	TN	Provider-based	6	0	0	0	5	0	0	0	0	0	0	0
Texas	TX	Freestanding	4	2	0	3	8	1	2	4	9	4	0	4
Texas	TX	Provider-based	15	0	0	1	15	0	1	0	3	0	0	0
Utah	UT	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Utah	UT	Provider-based	1	0	1	0	0	0	0	0	1	0	0	0
Vermont	VT	Freestanding	0	0	0	0	0	0	0	0	0	0	0	0
Vermont	VT	Provider-based	0	0	0	0	0	0	0	0	0	0	0	0
Virginia	VA	Freestanding	0	0	14	0	3	0	0	0	0	0	0	1
Virginia	VA	Provider-based	1	0	0	0	8	0	0	0	1	0	0	2
Washington	WA	Freestanding	2	0	2	0	1	0	0	0	0	0	0	1
Washington	WA	Provider-based	2	0	0	0	2	1	0	0	0	0	0	0
West Virginia	WV	Freestanding	2	0	0	1	0	0	0	3	0	0	0	0
West Virginia	WV	Provider-based	8	0	0	0	2	0	0	0	0	0	0	0
Wisconsin	WI	Freestanding	0	0	1	0	0	1	0	0	0	1	0	0
Wisconsin	WI	Provider-based	9	0	0	0	12	0	0	0	15	0	0	0
Wyoming	WY	Freestanding	0	0	1	0	0	0	0	0	1	0	0	0
Wyoming	WY	Provider-based	3	0	0	0	0	0	0	0	2	0	0	0
National Total			345	35	42	47	350	35	12	47	302	40	10	62

Figure 1-National Rural Health Clinics Trend Analysis (2020 - 2023)

Additionally, the NARHC staff requested additional charts to demonstrate the impact of the RHC status changes over time upon both types of RHCs: (see charts below)

- National Overall RHC Overall Impact (**Figure 2**)
- National Impact Upon Free-Standing RHCs (**Figure 3**)
- National Impact Upon Provider-Based RHCs (**Figure 4**)
- National Impact Upon New RHC Openings (**Figure 5**)
- National Impact Upon RHC Closures (**Figure 6**)
- National Impact Upon RHCs No Longer Participating (**Figure 7**)

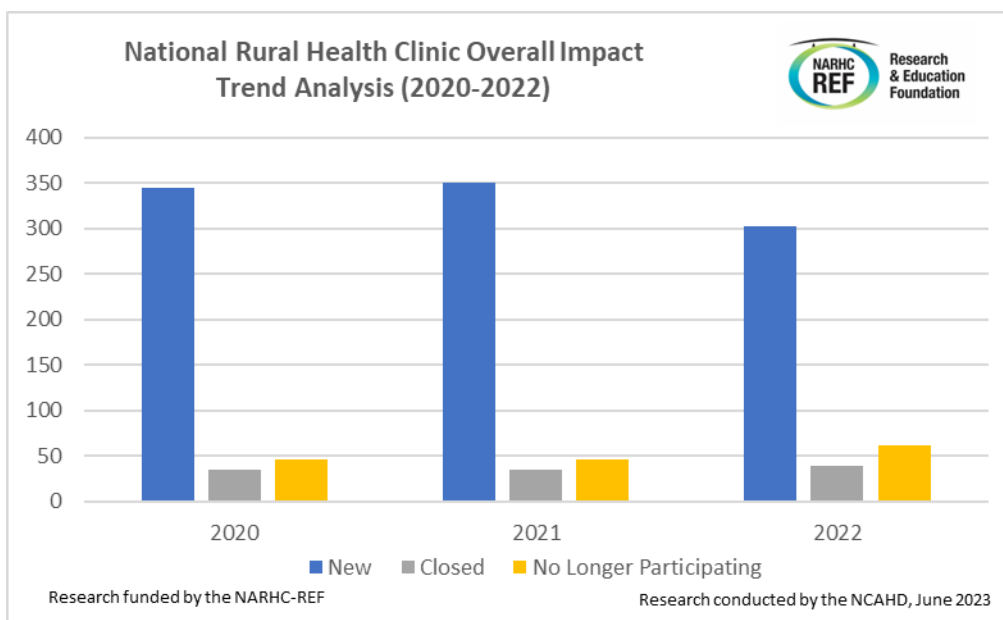


Figure 2 - National RHC Overall Impact

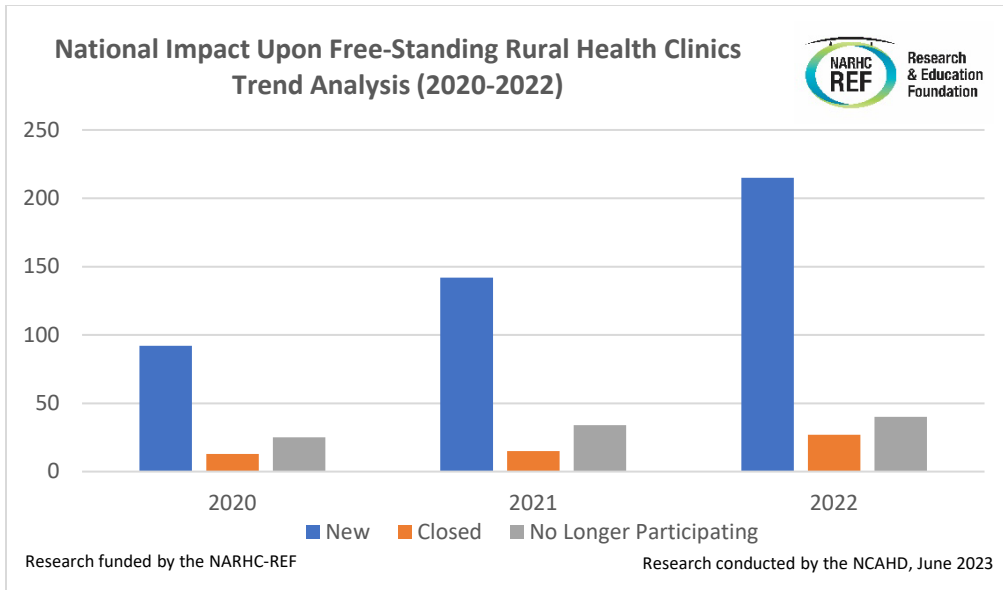


Figure 3 - National Impact upon Free-Standing RHCs

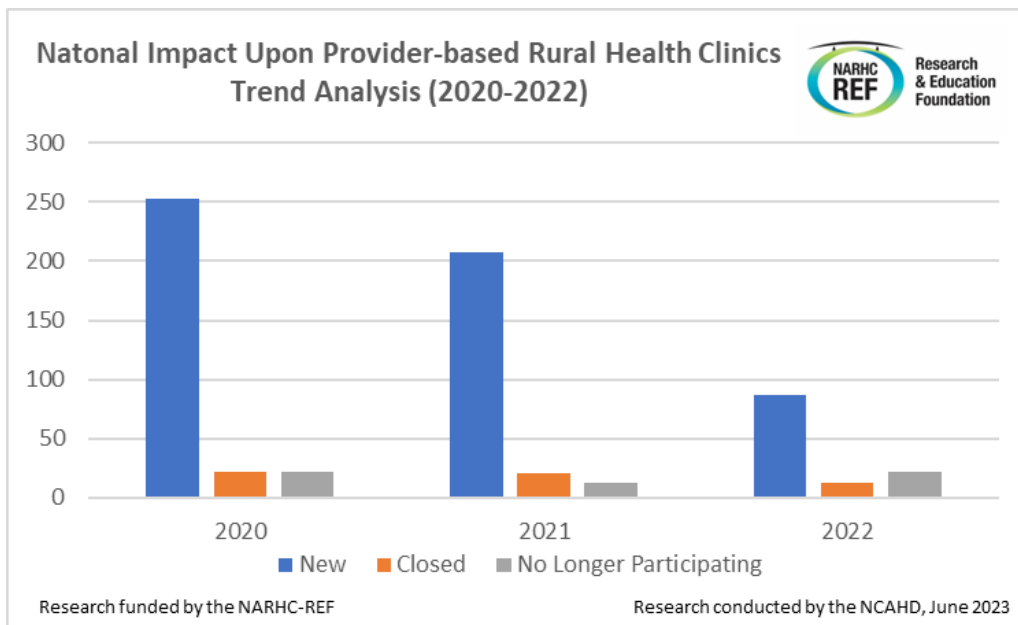


Figure 4 - National Impact upon Provider-Based RHCs

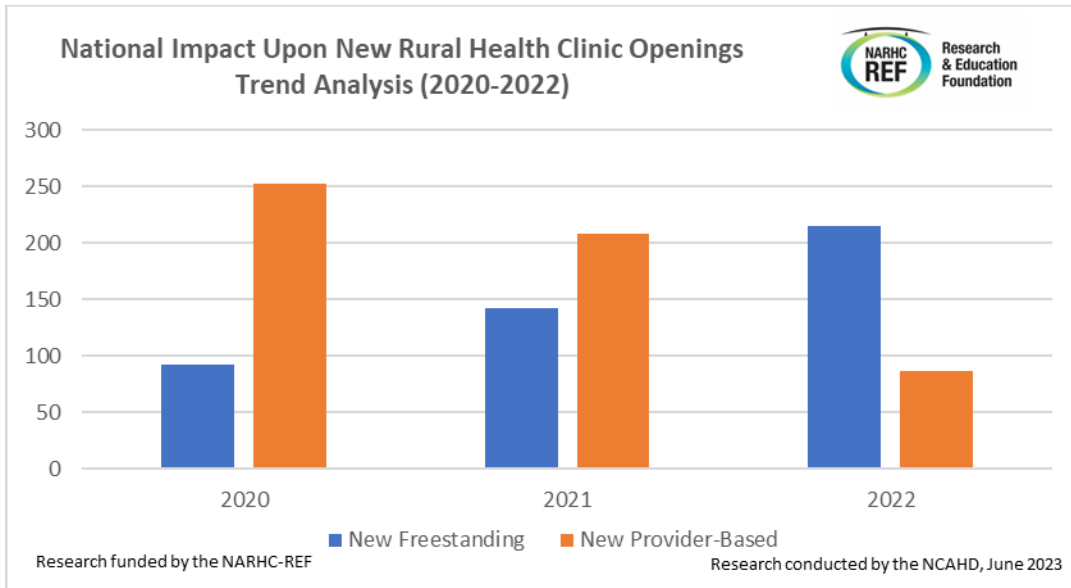


Figure 5 - National Impact of RHC New Openings

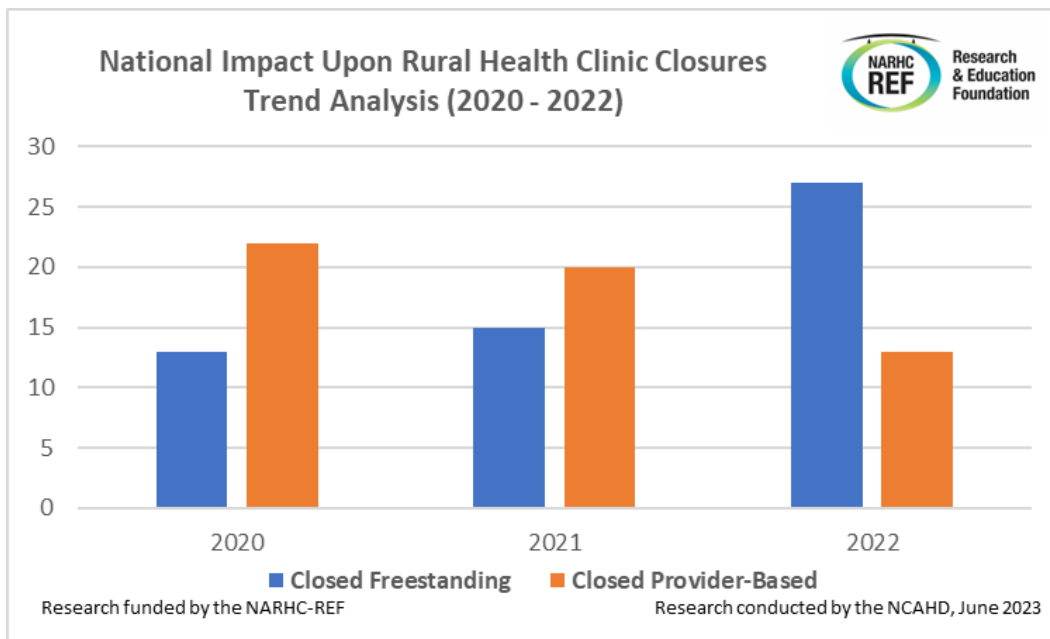


Figure 6 - National Impact of RHCs Closures

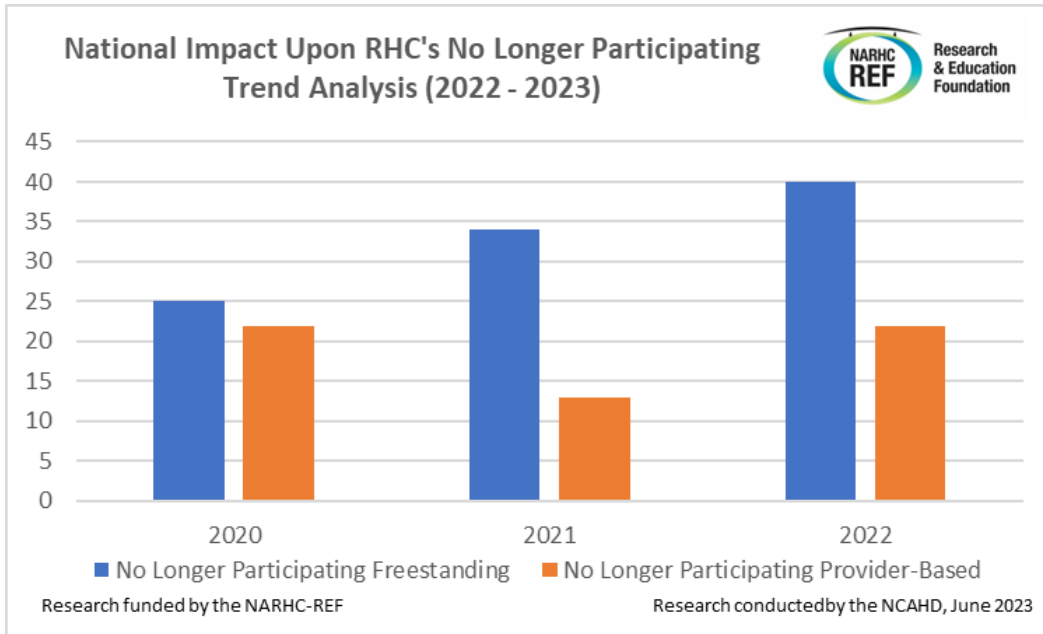
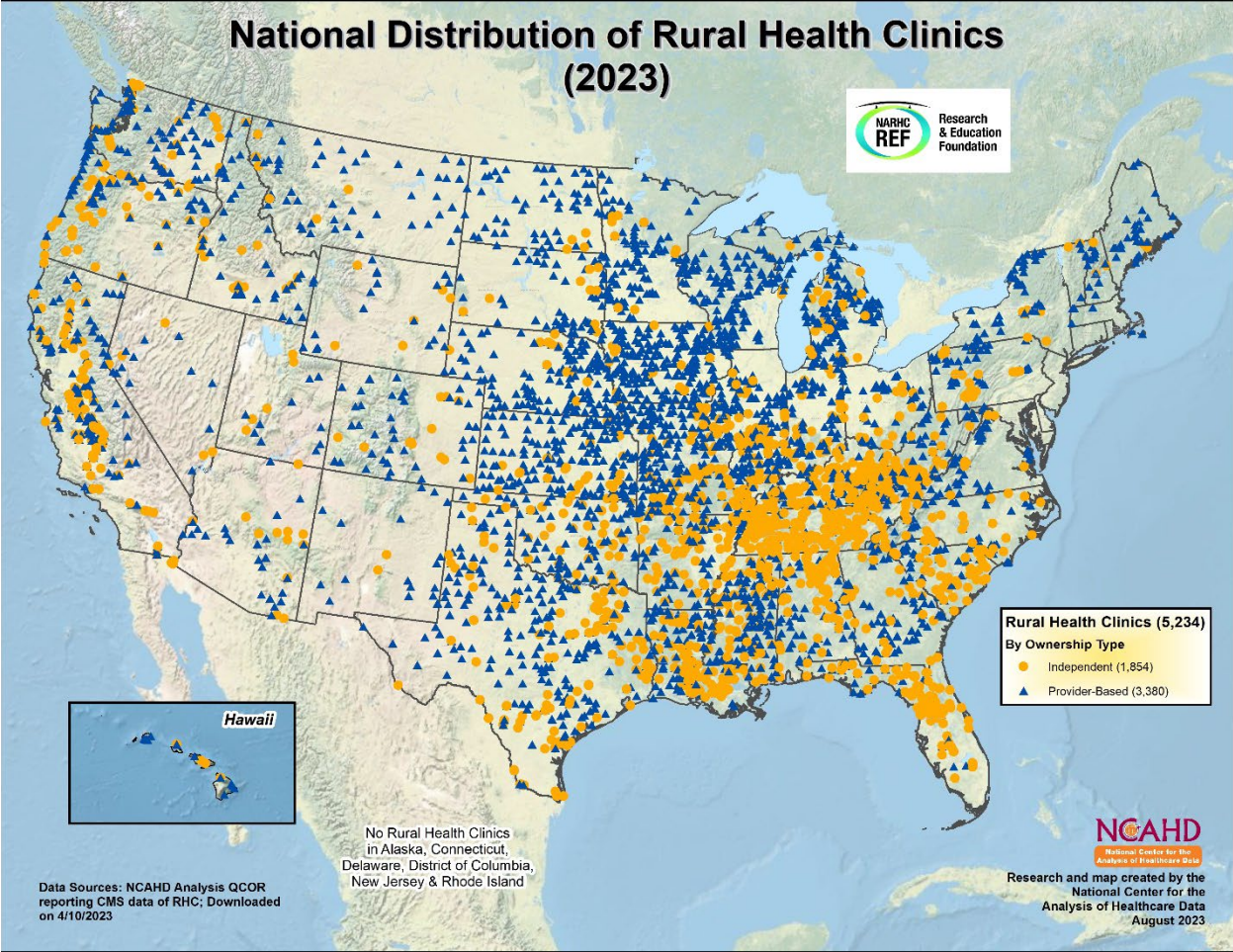


Figure 7 - National Impact of No Longer Participating RHCs

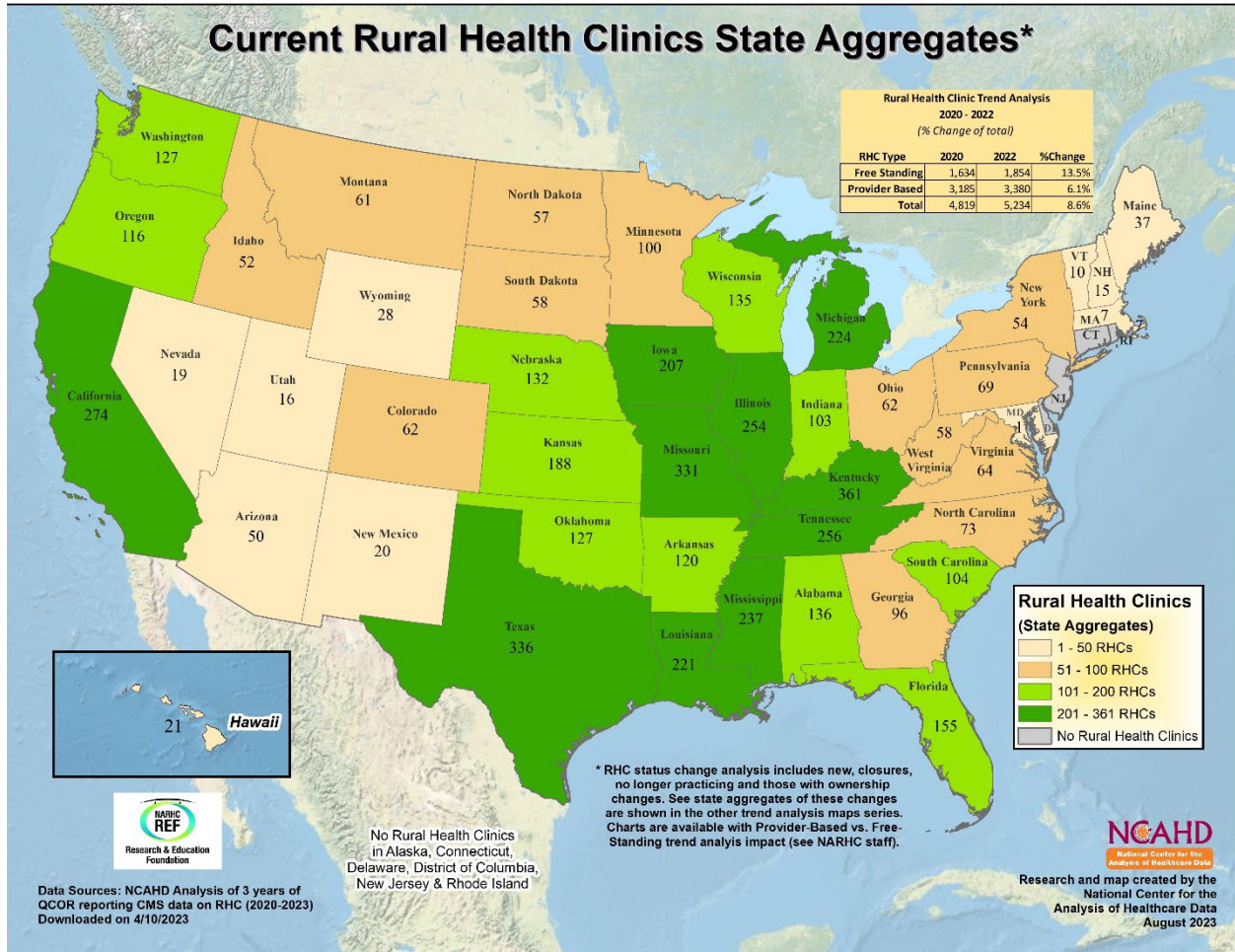
Based in part from our previous research, the current charts, national summaries, and discussions with the NARHC staff, we determined that maps would be an attractive way to share the research results. Additional analysis was performed on the trend analysis to determine percent change by state rather than just the changes to the total number caused by the status changes, expansions (new) and closures. Please see the maps/analysis below:

- National Distribution of Rural Health Clinics (**Map 1**)
- Current Rural Health Clinics State Aggregates (**Map 2**)
- Impact of Rural Health Clinics Status Change by State (**Map 3**)
- New Rural Health Clinics Openings (**Map 4**)
- Rural Health Clinics Closures (**Map 5**)
- Rural Health Clinics No Longer Practicing as a Rural Health Clinic (**Map 6**)

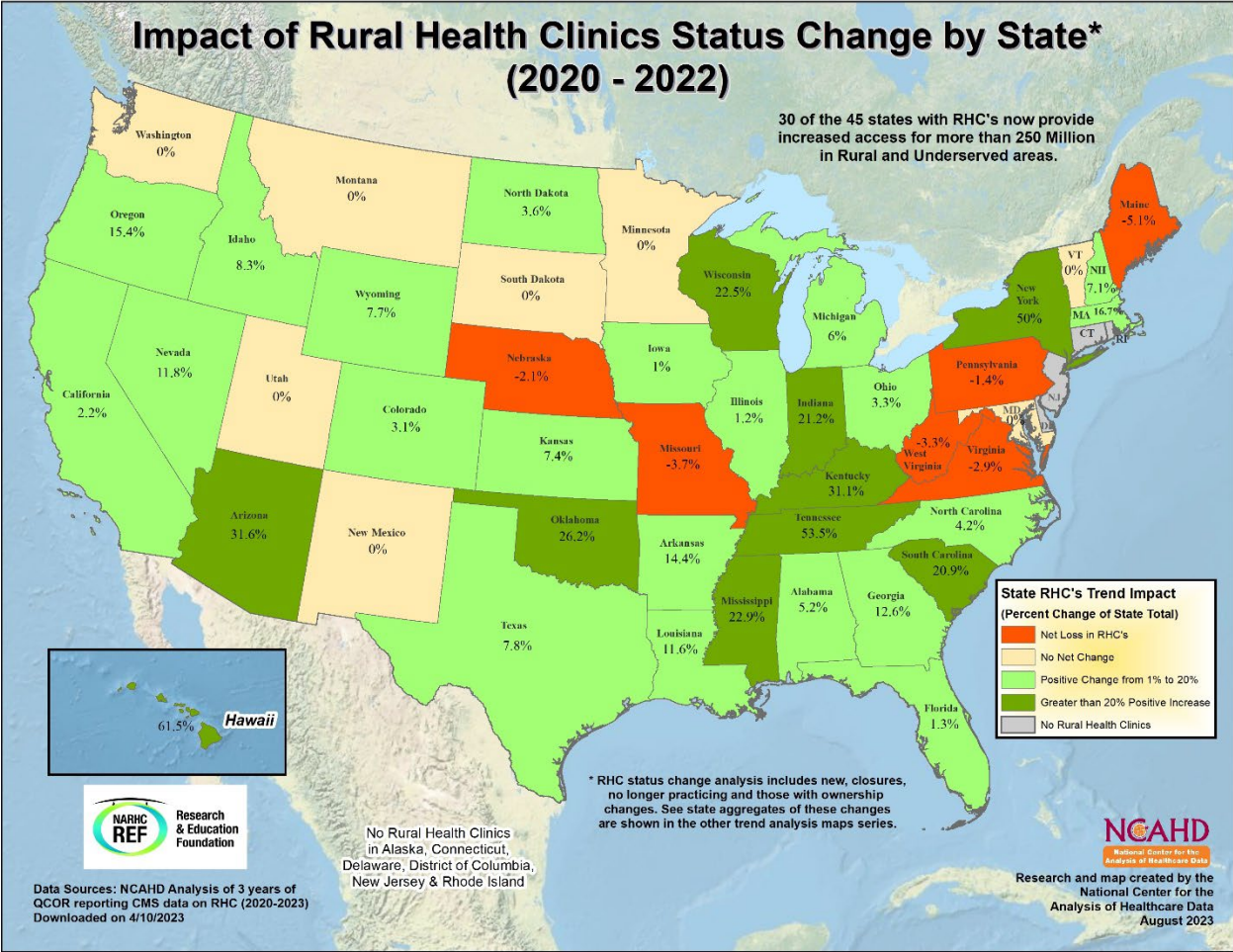


Map 1 - National Distribution of Rural Health Clinics (2023)

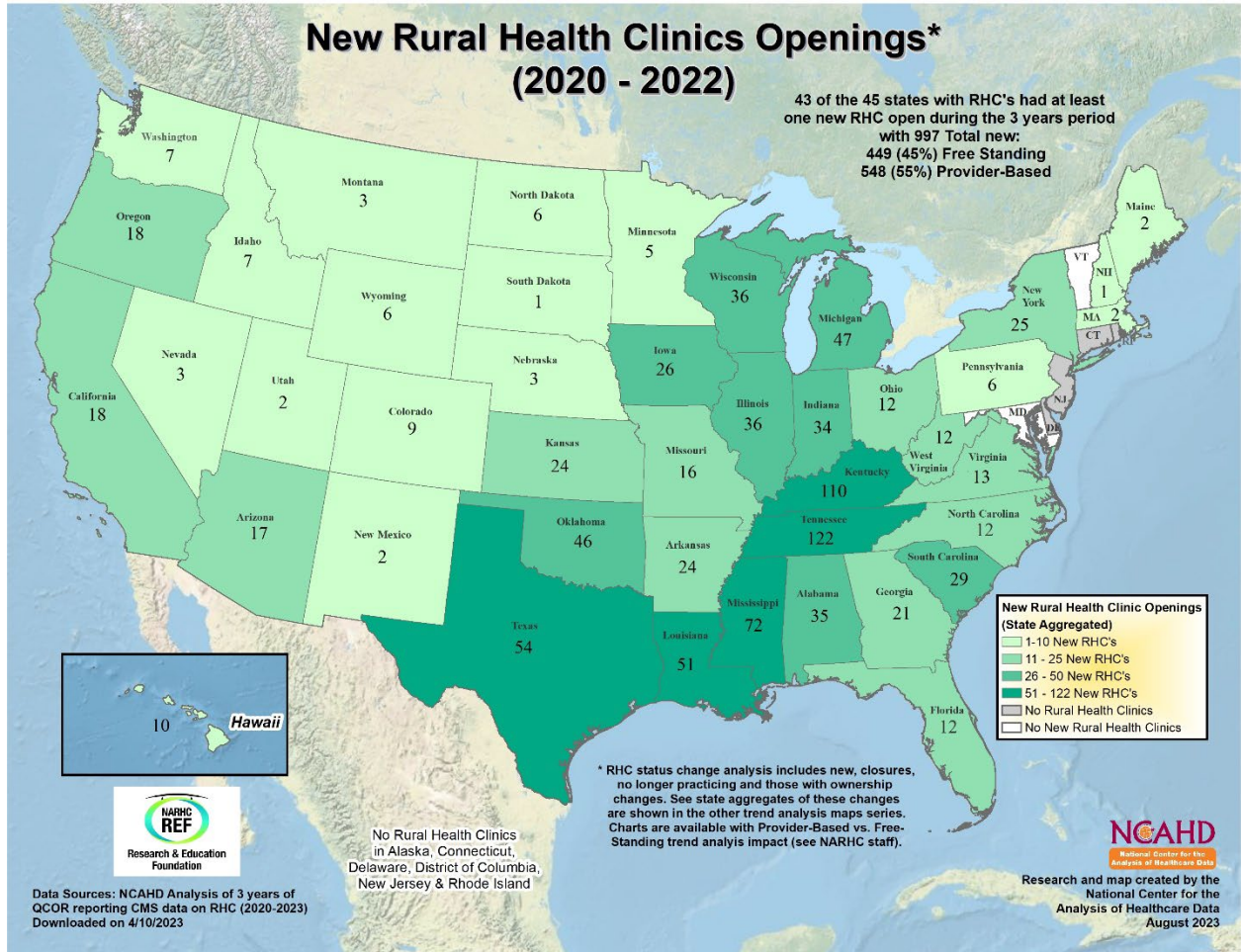
Current Rural Health Clinics State Aggregates*



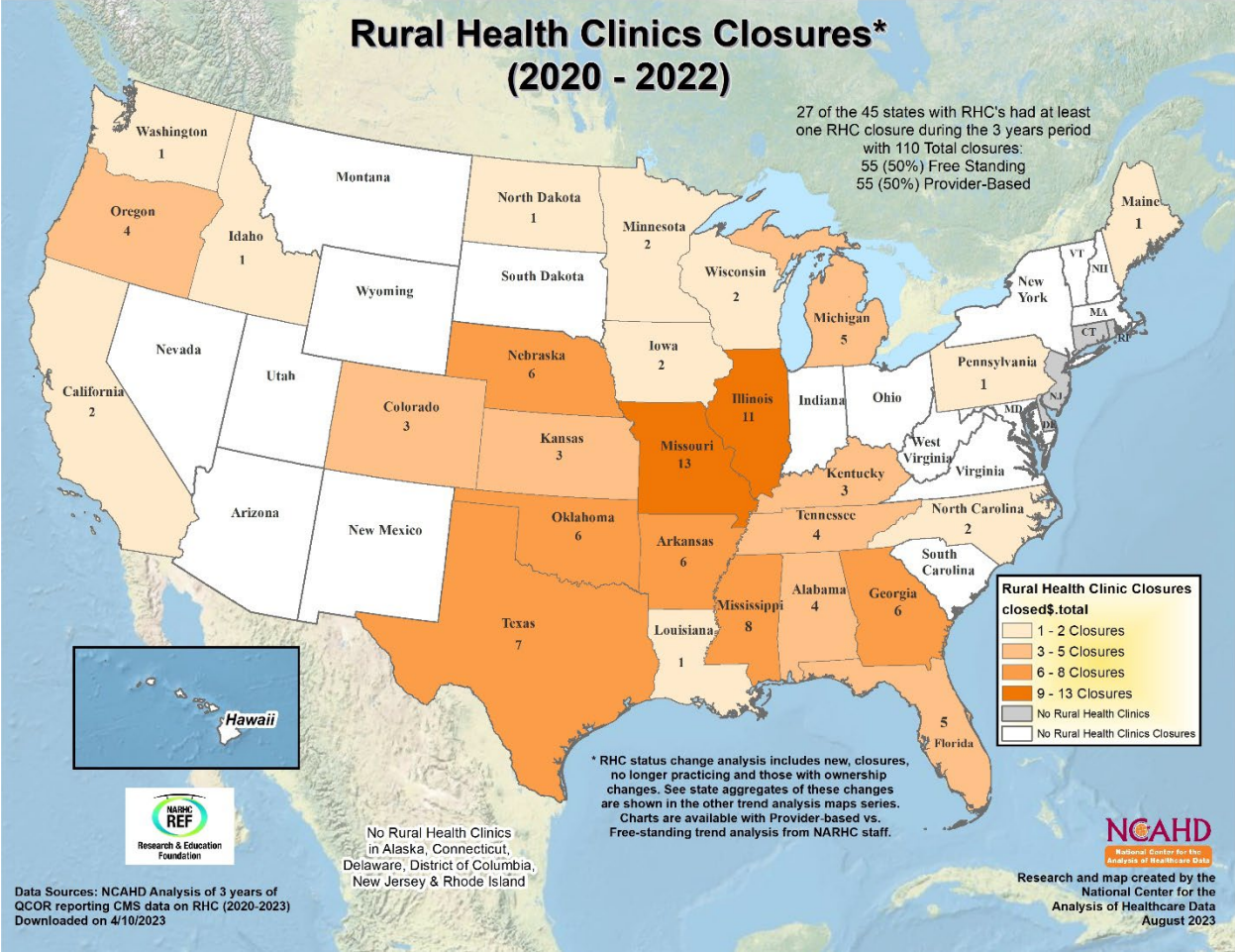
Map 2 – Current Rural Health Clinics State Aggregates (2023)



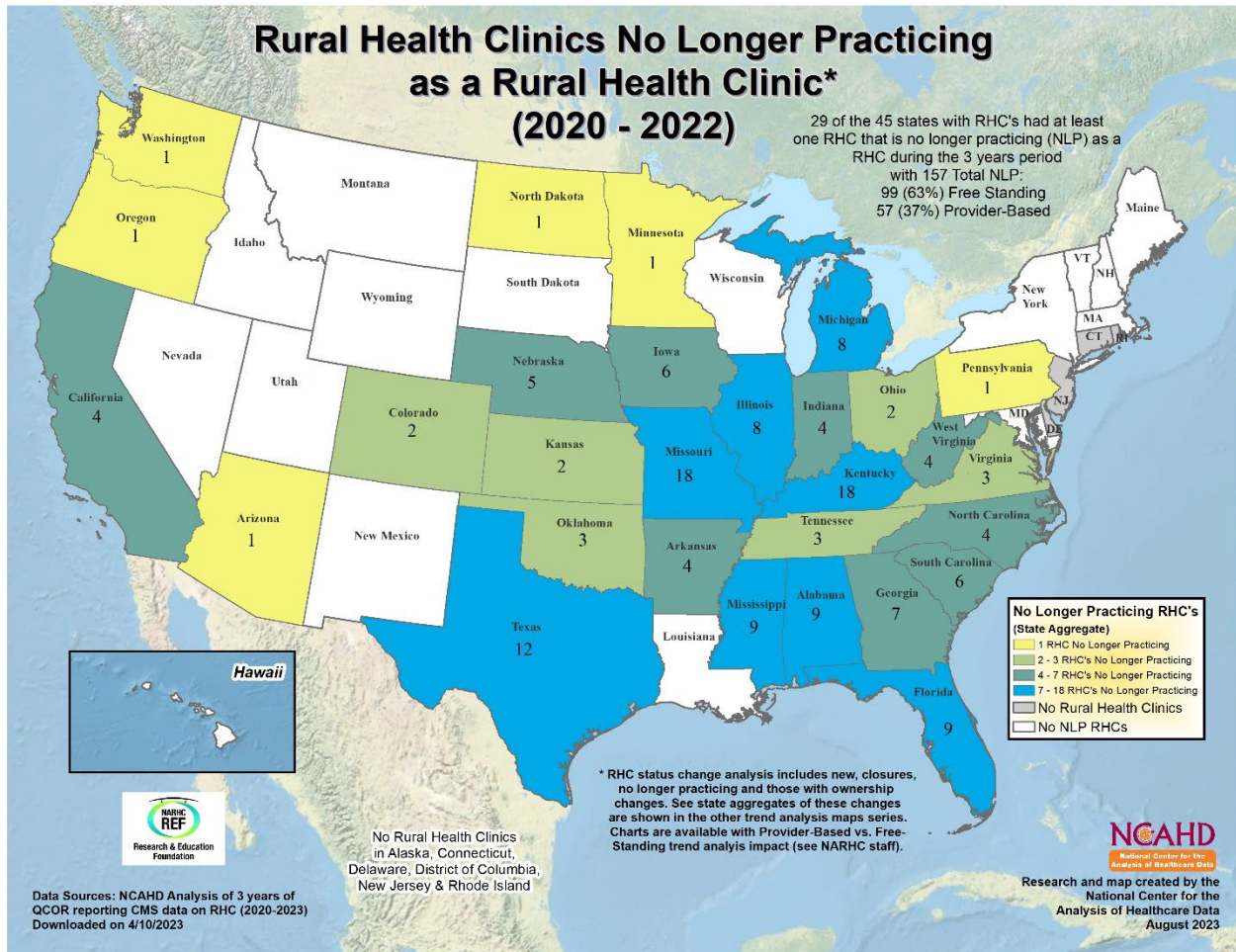
Map 3 – Impact of Rural Health Clinics Status Change by State (2020-2022)



Map 4 – New Rural Health Clinics Openings (2020-2022)



Map 5 – New Rural Health Clinics Closures (2020-2022)



Map 6 – Rural Health Clinics No Longer Practicing as a Rural Health Clinic (2020-2022)

Limitations

Since the Rural Health Clinic QCOR data is frequently updated, the data currently available may not reflect the data that this analysis was based upon which was collected on 4/10/2023. The research conducted to determine why a RHC received a closed or merged status code enabled a more accurate assessment of the landscape of the national Rural Health Clinics program. Therefore, it is the intention of the NARHC-REF to consider updating this research regularly in the future.